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Effect of Sex-Biased and Sex-Fair Item Selections on Interest Inventory Results

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EFFECT OF SEX-BIASED AND SEX-FAIR ITEM SELECTIONS ON INTEREST INVENTORY RESULTS

BY

CHRISTINE ELIZABETH FRANKLIN-PANEK

B.A., Kent State University, 1971

M.S., Eastern Illinois University, 1978

ABSTRACT OF THESIS

Submitted in partial fulfillment of the requirements
for the degree of Specialist In Education at the Graduate School
of Eastern Illinois University

CHARLESTON, ILLINOIS
1985

ABSTRACT

The purpose of this study was to examine the extent to which sex-biased items on an interest inventory stereotype the occupational interests by gender. Subjects were 194 eighth through twelfth grade students in rural, central Illinois public schools. A representative sample of students were administered a survey to determine which of these selection items depicted activities and occupations most commonly associated with males, females or both genders equally. Next, the interest inventory was revised to include only sex-fair terms.

Significant differences in occupational interests were found between males and females on the pretest using sex-biased selection items, with 73.3% of females scoring highest in Social Service and 62.5% of males scoring highest in Technical and Applied Science.

Posttest results indicated that the use of sex-fair items on inventories assisted high school males to explore a wider range of career opportunities. Sex-fair wording had little effect on expanding the career interests of high school females. Results may suggest the socialization of females in our society creates deep and long lasting effects which limit and constrict the potential of young women. Until the life experiences of females change, true gender differences will continue in career development.

In conclusion, results indicate the need for high school counselors to interpret interest inventories cautiously. Further, counselors should discuss with students the stereotyping effects of socialization on interest inventory results and encourage students, especially females, to also consider careers in their second or third choice interest area.

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(TITLE)

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FIELD STUDY

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Specialist in Education

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

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I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
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PURPOSE OF THE STUDY

Introduction

Interest inventories have been used for more than half a century for career exploration (Diamond, 1978). Today, they are a familiar tool to many counselors, many of whom have incorporated interest inventories as a basic component into their career guidance programs. One estimate indicates that more than 3.5 million persons each year take machine-scored and hand-scored interest inventories (Tittle & Zytowski, 1978). Therefore, the number of individuals potentially influenced by inventories is enormous.

These interest inventories play an important role in student evaluation. Results are used to track vocational high school students into classes and programs, in addition to aiding college-bound students in selecting majors. Because of the long-range effects of selecting a career, interest inventories need to be examined closely to determine what they measure and how this is done.

Interest Inventories

Steiger (1979) defines career guidance tests as measures of likes, interests, and experiences that are commonly used to help steer their clients toward appropriate occupations. Holland (1974) concluded that interest inventories provide occupational predictions of satisfaction and achievement; supplies the full range of vocational options by field and level; contributes to meaningful relationships with educational and occupational information; and supplies information in accordance with

the person's life circumstances without regard to age, race, sex, and social status.

According to Harmon (1973) interest measures generally are designed to tell whether a specific individual should consider, train for, or enter a specific occupation or a specific type of occupation.

Types of Interest Measures

There are two basic types of interest measures (Steiger, 1979): 1) Interest inventories which compare the client's expressed interests with those of men and women currently employed in various occupations (e.g. Kuder Occupational Interest Survey, Strong Vocational Interest Blank); and 2) Instrument inventories which assess the client's responses to questions about their interests in terms of certain arbitrarily or empirically determined clusters of responses. Each response cluster is supposed to indicate an affinity for specific kinds of work or work environments. Regardless of the type, these assessment tools are neither aptitude or intelligence tests nor measures of skill or knowledge. They cannot determine the ability of a person to master the skills necessary to hold a job in a particular occupation. They assess only interest. For example, the first type supposedly indicates whether the student possesses interests in common with those individuals for a specific occupational group (e.g. The student indicates an interest in classical music. Most physicians like classical music; therefore, the student shares the same interest as physicians.). Regarding the second type of interest inventories, they proportedly measure whether a student enjoys activities related to certain occupational skills (e.g. The student likes to work with clay, build models and refinish furniture;

therefore, she/he is suited to occupations involving the use of the hands.).

Use of Interest Inventories in Illinois

The Illinois State Board of Education in 1977 issued a sourcebook addressing the vocational/career interest assessment needs of the counselors in Illinois high schools. Counselors were advised to administer interest inventories early in the student's high schooling to facilitate optimum career development. According to Anderson and Farmer (1977), the aim of career counseling should be to help the students get to know themselves better and to help broaden their understanding of career opportunities in the world of work. Interest inventories can help students expand their occupational choice.

The sourcebook states that interest inventories have at least three uses for facilitating the career development of high school students: 1) They can be used to facilitate career exploration by suggesting a larger number of occupational fields to consider; 2) They can be used to facilitate career crystallization by confirming occupational fields (or field) that a student has been seriously considering; and 3) They can be used to facilitate career development by disconfirming ideas about the self. Disconfirming information should lead to new insights about the self. According to Anderson and Farmer, the overall aim of career guidance should be in self-discovery and in broadening horizons.

Testing Issues

According to the Association of Measurement and Evaluation in Guidance (AMEG),testing is a technique for obtaining information. The

benefit of testing is that information is provided in an organized form. As a technique, testing itself should be unbiased, i.e., a tool that serves the ends of the user. The technology of testing should also provide methods for determining how dependable or undependable the information is (AMEG, 1972).

Sex Bias. In recent years, however, tests and testing programs have been challenged by those who believe they operate to the disadvantage of one or more minority groups (AMEG, 1972). In particular, sex bias in interest inventories has become a major concern of measurement (Diamond, 1976). The issues surrounding the question of sex bias in interest measurement are complex, both socially and technically. The question of what constitutes sex bias has been a difficult one, often based on social value judgments (Harmon, 1973).

Consequently, in 1973, the AMEG, responding to an American Personnel and Guidance Association (APGA) Senate request, established the Commission on Sex Bias in Measurement. Although the commission was created to study sex bias in measurement, their major emphasis was placed on sex bias in interest measurement. The following definition resulted:

> Within the context of career guidance, sex bias is that condition or provision which influences a person to limit his or her consideration of career opportunities solely on the basis of that person's sex. (AMEG, 1975, p.7)

The primary concern of the AMEG commission is that neither sex be limited in occupational options on the basis of interest inventory results (Harmon, 1973).

In 1974 the National Institute of Education, Career Education Program, developed a set of guidelines for sex bias and sex fairness in

interest inventories. Sex bias "within the context of career guidance" was defined as:

> Any factor that might influence a person to limit--or might cause others to limit--his or her consideration of career solely on the the basis of gender. (Diamond, 1976, p. 28).

This definition expresses the concern that career alternatives not be limited by bias or stereotyped sex roles in the world of work.

Again in reference to interest inventories, Hanson and Prediger (1974) state:

> Sex bias exists to the extent that the distribution of opportunities suggested to one sex is disproportionate to that suggested to the other sex.

Still another definition has been suggested by John Holland (1975):

> An inventory is unbiased when its experimental effects on female and male respondents are similar and of about the same magnitude--that is, when a person acquires more vocational options, becomes more certain, or learn's more about himself/herself and the world of work.

Illinois Career Guidance Center Network

Recent Federal legislation for vocational education (The Education Amendments of 1976, P.L. 94.482) generated funds for career guidance and counseling services. Illinois opted to allocate this money for the establishment of nineteen career guidance centers located throughout the state.

Two of their many functions include: 1) Assistance in developing quality career guidance and counseling programs, and 2) Assistance in recognizing the changing work patterns of women and effectively overcoming sex-role stereotyping (see Appendix A).

Vocational Information Program (VIP)

Ten of the nineteen centers provided the Vocational Information Program (VIP) for the use of their local school systems. The VIP is an automated career guidance system designed to provide an organized approach to career exploration.

The initial development of VIP began in 1974 with the CIOEDC project, funded by the Illinois Division of Vocational and Technical Education. This project involved the cooperation of Joliet Township High School Disctrict #204, Joliet Grade School District #86, and Joliet Junior College District #525. Through the efforts of these three districts, the computerized VIP evolved.

The VIP consists of ten modules: a vocational interest inventory, career descriptions, career forecasts, military careers, two-year colleges, four-year colleges, financial aids, local workforce survey, a high school information quiz, and high school course selction. Each module provides the student with his/her own individualized computer printout.

Of the ten modules, the vocational interest inventory is the most widely used. This twenty-four question, multiple-choice inventory was developed jointly by George Schlott, a guidance counselor at Plainfield High School, and John Cripe, Data Processor at Joliet Junior College. The theoretical framework of the inventory is based on John Holland's theory of careers (Holland, 1973). The VIP interest inventory is an adaptation of the national Computerized Vocational Information System (CVIS), of which John Holland served as an advisor.

Students receive a computer printout ranking six occupational

interest areas according to their response on the inventory. The six occupational interest areas are: social service, organizational, technical and applied science, promotional, scientific, and creative. These six clusters closely correspond with Holland's six personality types and are presented in Table 1.

TABLE 1

Comparison of VIP Interest Clusters to Holland's Occupational Clusters

Holland	VIP
R (Realistic)	TEC (Technical & Applied)
I (Investigative)	SCI (Scientific)
A (Artistic)	CRE (Creative)
S (Social)	SS (Social Service)
E (Enterprising)	PRO (Promotional)
C (Conventional)	ORG (Organizational)

The student then is directed through the remaining nine VIP modules based on the results of the interest inventory. For example, if the student ranks highest in the Promotional cluster, she/he is given a list of careers within that interest area from which to choose.

Because the entire VIP guidance process is often determined by the results of the interest inventory, it is critical that the results accurately reflect the true interests of the student.

After a short period of use, however, several VIP inventory users become concerned about a biasing effect when the majority of their female students consistently rated highest in social service (SS) and the majority of their male students consistently rated highest in Technical and Applied Science (TEC).

A quick review of the 896 inventories on file at Region 9 Career Guidance Center showed that 85% of the female students rated highest in Social Service and 94% of the males rated highest in Technical and Applied Sciences.

If a biasing of the results were true, then the Career Guidance Centers were failing to provide a large segment of the state with a quality career guidance program free from sex-role stereotyping.

Possible Causes of Bias

The possible limiting effect of interest inventories on career options can occur at several levels (Harmon, 1973). The user should look for possible sex bias in 1) the actual questions asked on the inventory, 2) the use of homogeneous scales, and 3) the use of occupation scales.

The Career Education Program of the National Institute of Education in 1974 developed a set of twenty-six guidelines for assessing sex bias and sex fairness in career interest inventories (see Appendix B). The guidelines are divided into three areas: I--The Inventory Itself; II--Technical Information; and III--Interpretive Information.

Reviewing these guidelines in reference to the VIP interest inventory, Section II which deals with Technical Information was eliminated. The VIP interest inventory is a nonstandardized instrument with no data as to its validity. Since the Technical Information section deals with sex bias due to the criterion and norm groups, this information was non-applicable.

Section III which deals with Interpretive Information also was eliminated as the cause of the biasing effect because the VIP manual complies to these guidelines.

The biasing effect appeared to fall within Section I, the Inventory Itself. The VIP inventory meets guidelines: IA--The same inventory form is used for both males and females; IB--Scores on all occupations and interest areas are given to both males and females, ID--Occupational titles are presented in gender-neutral terms; and IE--The generic "he" or "she" is eliminated.

The VIP interest inventory, however, failed to meet guideline IC:

> Insofar as possible, item pools should reflect experiences and activities equally familiar to both females and males. In instances where this is not possible, a minimum requirement is that the number of items generally favored by each sex be balanced. Further, it is desirable that the balance of items favored by each set be achieved with individual scales.

In reviewing the VIP interest inventory (see Appendix C), blatant violation of this guideline is found. For question twelve "I would most like to be: " item D is "a member of the football team." This is not a common or familiar experience for females, yet answer D is the item which adds one point to the Technical and Applied Science interest cluster, an interest area in which female students rarely score high. Due to this problem inherent in the VIP, the present research was conducted.

Purpose of the Study

The purpose of this study was to identify those item selections used in the VIP Interest Inventory which are stereotypically associated with males or females and to replace those sex-biased items with sex-fair, or neutral, items. It is hypothesized that a revised interest inventory with a sex-fair item pool will produce diverse occupational interest areas for both males and females.

CHAPTER II

REVIEW OF THE LITERATURE

Much has been written regarding sex bias in the scale construction, norm groups and reporting procedures of interest inventories (Diamond, 1978; Hanson & Rayman, 1978; Hanson, Noeth, Prediger, 1978; Johansson & Harmon, 1978; Webber & Harmon, 1978; Borgen & Helms, 1978; Johnson, 1978).

There is a paucity of literature dealing with the issue of sex bias as a result of item selection in interest inventories (Rayman, 1974).

Stereotypes--Adjectives

There have been several studies identifying characteristics stereotypically associated with males and females. Broverman, Vogel, Broverman, Clarkson & Rosenkrantz (1972) found that feminity has traditionally been associated with warmth and expressiveness. Stereotypic female items consist of attributes such as: gentle, sensitive, tactful, religious, dependent, passive and noncompetitive. Male-valued items cluster around competency, rationality and assertion. Men are stereotypically perceived as being independent, active, competitive, business-minded, confident and ambitious.

Using the Gough Adjective Checklist, Zimet & Zimet (1977) identified 92 words as "female" and 99 words as "male." Male characteristics were centered around achievement, autonomy and aggression on scales. Female characteristics were centered around the deference scale.

Bem (1974), using the Bem Sex-Role Inventory, found that masculinity was associated with an instrumental cognitive orientation which focuses on "getting the job done." Masculine items included leadership, self-reliance, risk-taking and competition. Feminity was associated with an expressive, affective orientation, with a concern for the welfare of others. Feminine items include compassionate, understanding, nuturant and yielding.

Stereotypes in Career Areas

Other authors have investigated specific career areas in regard to sex-role stereotyping. Females' occupational motivation can generally be classified as altruistic, e.g., showing an expressed interest in helping others. Males, however, were more frequently cited as seeking rewarding careers (Ace, Graen & Davis, 1972). Cegelka, Omvig & Larimore (1974) found considerable differences in the vocational interests of males and females. Males scored higher on interests in manual work, machine work, inspecting and testing, crafts and precision operations, numerical, appraisal, agriculture, applied technology, management, supervision and sales. Females scored higher on interests in personal services, caring for people or animals, clerical work, consumer services, nursing, artistic, entertainment, teaching, counseling and social work.

Reiter (1975) conducted a field-by-field compairson of male and female occupational preference patterns and found a low degree of similarity between the two sex groups, especially in the fields of business contact and mechanical occupations.

A similar finding by Campbell (1973) showed that occupational choices were quite different for the two sexes. In addition to this, girls choices were more homogeneous than boys. Female occupational choices were limited to those based on physical beauty (stewardess, fashion model, interior decorator) or nuturance (elementary school teacher, director of child care center, designer of children's clothes). The males, however, exhibited a far wider range of occupational choices from cartoonist to inventor.

Twenty-five occupations were investigated by Panek, Rush & Greenawalt (1977). Eight were perceived as male occupations, i.e., lawyer, city planner, police officer, letter carrier, truck driver, banker, baker, and office manager. Six were identified as female occupations, i.e., elementary school teacher, dietician, social worker, typist, librarian, and nurse.

One of the most striking features of the National Study of Student Career Development (Prediger, Roth & Noeth, 1974) is the difference in responses of the two sexes. Over half of the eleventh grade girls choose occupations falling in only 3 of the 25 job families: clerical and secretarial work, education and social service, nursing and human care. By contrast, 7 per cent of the boys preferred occupations in these areas. Nearly half of the boys' choices fell into the technologies and trade cluster, in contrast to only 7 percent of the girls' choices.

Based on these and other studies, it is obvious that efforts to broaden the career options and choices of both males and females must overcome the pervasive influence of sex-role stereotyping.

Role Appropriateness

Milton (1959) found that the role appropriateness of problem content could eliminate sex differences in problem solving. Milton first selected a set of conventional problems and found they were most common to male experiences. He then constructed a parallel set in which the tasks remained the same, but the content of the problems had been altered to be more appropriate to the female role. Females improved in problem solving when given examples with content appropriate to the feminine role. An example of the conventional (male-appropriate) problem reads:

> Snuffy, the tramp rolls his own cigarettes from butts he collects in his travels. The tobacco from six butts produces one new cigarette. One day he collected a total of 72 butts. He smoked a cigarette every half hour, yet this supply lasted him seven hours. How did he manage this?

The parallel problem in the female-appropriate form is:

> Sally, the cook, cuts cookies from batter she makes each morning. She rolls out six cups of batter to cut one dozen round cookies. One day she made a total of 72 cups of batter. She sold a dozen cookies every half hour, yet this supply lasted her seven hours. How did she manage this?

Mead (1949) found that every known society creates and maintains artificial divisions and expectations which limit the other sex. Mead proposed that for men and women to fully develop their potential, they must respond as human beings as opposed to basing their actions on some stereotypically defined sex role.

Sex-fair Item Selection

An interest inventory with a common item pool well edited for sex stereotyped wording could be equally useful to men and women in expanding

occupational choices (Harmon, 1973). It follows then that in order to maximize results on an interest inventory, item selection should be content appropriate for each sex role.

The hypothesis of this study is that the choice of wording can overcome the effects of sex bias. The sex difference phenomena is fairly situational. The role-appropriate stimuli can produce results which are true to the student's actual interest. It is not that men are innately better at mechanical things or that they have greater skills in technical areas, but that they are responding to the stimulus properties of the immediate situation, i.e., the wording of the item pool.

CHAPTER III

METHOD

The present study involved four (4) stages: In the first step, a pretest was administered using the original VIP Interest Inventory to high school students. The second step consisted of the administration of a survey to determine whether high school students perceived items on the VIP to be sex biased. The third step was the revision of the VIP to eliminate sex-biased item selections. Finally, in step four, the revised, sex fair VIP Interest Inventory was administered as a posttest.

Step 1 -- Pretest

Six schools in East Central Illinois were selected to participate in the study. Schools were located in rural, small towns and small city settings. Student enrollment in these high schools ranged in size from 75 to 800. Students were white and from lower to middle socio-economic status. Two hundred and fifty-nine (259) students in grades 8 - 12 were administered the original VIP Interest Inventory (see Appendix C).

Step 2 -- Survey

Item selections from the VIP Interest Inventory were arranged in survey format. Four hundred and sixty students (460) students from twelve (12) different schools in East Central Illinois participated in this phase of the study. Students were asked to rate 100 adjectives; they were to indicate whether the adjective was "male," female," or "both." Thirty eight (38) occupational titles were also listed, and the students were asked to mark how they perceived each occupation as to gender (See Appendix D).

Step 3 -- Revision of VIP Interest Inventory

Based on the results of the preceding survey (Step 2), those item selections which were analyzed as being predominately male or female were eliminated from the VIP Interest Inventory (See Appendix E). Many of the original item selections consisted of two phrases or adjectives, such as: "A. sensitive and creative." When one of the two adjectives was sex biased, the sex-biased adjective was eliminated. When both phrases or adjectives were sex biased, new item selections were substituted with sex-balanced items developed by Rayman (1974) and Zimet & Zimet (1977). Occupational titles were revised based on sex fair titles identified by Panek, Rush & Greenawalt (1977). Substitutions were categorized according to interest cluster using Holland's Occupations Finder, 1974.

Step 4 -- Posttest

Six months after the pretest was given, the revised interest inventory was administered to two hundred and twenty-three (223) students. Thirty-six (36) students who participated in the pretest were unavailable for retesting.

CHAPTER IV

RESULTS

Data was gathered and analyzed for three stages: 1) pretest, 2) survey, and 3) posttest. Of the two hundred and twenty-three (223) pre and posttest scores obtained, twenty-nine (29) inventories had to be eliminated from the study due to incomplete or inaccurate responses; or in the majority of cases, interests were so nebulous and diffuse that no one interest area emerged. Those inventories with two or more clusters tied for first ranking were eliminated. One hundred and ninety-four (194) pre and posttests, consisting of ninety (90) females and one hundred and four (104) males were analyzed. Data results from the pretest were examined in two ways: by Interest Cluster and by Gender. Clusters were examined for disproportionate composition.

Definition of "Disproportionate"

Matthews and McCune (1978) base their definition on the belief that ideally if females and males would enroll equally in the program areas, the percentage would be 50 percent female and 50 percent male. Enrollments are disproportionate if they consist of between 75-90 percent female or male, with 90% being excessive. The Illinois State Board of Education defines enrollment as disproportionate if 80% or more of one sex predominates. For the purpose of the study, the 80/20 ration was used to determine disproportionate.

Pretest

By Interest Cluster. In analyzing the results according to interest clusters, two areas appeared to be disproportionate in

composition by gender. Social Service was a female-dominated area, consisting of 80.3% females and 19.7% males. Two interest areas appeared to be male dominated, both Scientific, and Technical and Applied Clusters. Scientific consisted of 83.3% males and 16.7% females. Technical and Applied Science consisted of 93.6% males and 6.4% females.

Three clusters appeared to be fairly sex balanced: the Creative, Organizational and Promotional Clusters, with the greatest variance being in Creative with 60/40 and the closest in Promotional with 44.4/55.6 (see Table 6).

By Gender. In examining the results by gender, 73.3% of the females rated highest in the Social Service Cluster. The second highest ranked area was Creative, with only 12.2% Scientific and Technical and Applied, each attracted only 1.1% of the females.

Sixty-two and one-half per cent (62.5) of the males rated highest in Technical and Applied. The second most frequently rated cluster was Social Science with 15.4% of the males rating highest in this category.

Ideally, if 100% of the students were evenly distributed over the six clusters, each cluster would consist of 16.7% of the student population. The only categories which fall within $\pm$ 5% of the averaged breakdown are the male ranking in the Social Service Cluster with 15.4% and the female ranking in Creative with 12.2%. Females in Social Service and males in Technical are excessively over represented in these areas. Organizational, Promotional, and Scientific Clusters are extremely under represented by both males and females.

Survey

A number of separate analyses were conducted on the survey as

follows. First, the list of 100 activities was analyzed with the Chi-Square (X^2) statistic in order to determine the gender association of these activities (note: all X^2 analyses used $p < .05$ as the critical value) on the basis of the frequency of participants categorizing these activities as Male, Female, or Both.

This analysis indicated participants significantly associated twenty-two (22) activities with males:

TABLE 2

Activities Significantly Associated Male[1]

01. Interested in Science
02. Interested in Mechanical Things
03. Successful as a Leader
04. Adventurous
05. Working Alone
06. Science or Math Problems
07. Fix Something
08. Forceful Personality
09. Do Science Experiments
10. Read about Space Exploration
11. Repair an Engine
12. Give a Campaign Speech
13. Make a Sales Pitch
14. Sell Things Door to Door
15. Lead Others
16. Experiment with Chemistry Set
17. Do Scientific Research for a Medical Cure
18. Build Equipment for a Laboratory
19. Member of a Science Club
20. Member of the Football Team
21. Build Things
22. Disregard the Rules

[1]Based on X^2 analysis with $p < .05$

Participants associated twenty (20) activities with females:

TABLE 3

Activities Significantly Associated Female[1]
01. Sensitive
02. Well Organized
03. Act on Feelings
04. Ask Friends for Help
05. Helping People
06. Play the Piano
07. Guide a new Student
08. Make Jewelry
09. Organize a Scrap Book
10. Organize a Photo Album
11. Get Dressed Up
12. Give a Party for People Whom I Don't Know
13. Keep Careful Records
14. Teach Self to Type
15. Promote a Neighborhood Talent Show
16. Tutor a Handicapped Student
17. School Librarian's Assistant
18. Think up Themes
19. Make Arrangements for Refreshment Stand
20. Express Something in Song

[1]Based on X^2 analysis with $p < .05$

Participants associated fifty-four (54) activities with both genders, and one (1) activity, i.e., "impulsive," was not significantly associated with Male, Female, or Both.

TABLE 4

Activities Significantly Associated with Both Genders[1]

01. Creative	30. Participate in Sports
02. Helpful	31. Job with little recognition
03. Intellectual	32. Teach others
04. Practical	33. Pick a Topic for a Report
05. Good at Following Directions	34. Paint a picture
06. Outgoing Personality	35. Be with a Group of Friends
07. Good at Influencing Others	36. Train Animals
08. Think through all Possibilities	37. Write/Produce a TV Program
09. Make a Logical Choice	38. Counsel Victims & Families
10. Take the most Practical Solution	39. Supervise collection of information about the Causes of Cancer
11. Original Thinker	
12. Idealistic	
13. Independent	40. Raise money for Cancer Benefit
14. Scholarly	41. Artist for the school paper
15. Common Sense	42. Member of a Musical Club
16. Hard Working	43. Member of a Social Studies Club
17. Popular	
18. Creative Work	44. Student Council Officer
19. Do Assigned Work Well	45. Work on Advertising Campaign
20. Sell New Ideas to People	46. Work on Homecoming Float
21. Artistic	47. Divide & Assign Jobs to Others
22. Social	48. Get Others Working & Involved
23. Dependable	49. Help Others
24. Write a story	50. Think up Ideas
25. Draw a Picture	51. Get a Job Well Done
26. Work with Group of People	52. Win a Contest or Compete
27. Work alone on a Project	53. Win a Contest or Compete
28. Solving puzzles	54. Organize a Protest Group
29. Concentrate	55. Go Along With the Rules

[1]Based on X^2 analysis with $p < .05$

Another set of Chi-Square analysis ($p < .05$) was performed in order to determine the gender association of thirty-eight (38) occupations. This analysis (see Table 5) indicated that, of the thirty-eight occupations presented, twenty (20) were significantly associated with Male, one (1) with Female, and sixteen (16) were associated with Both (Males & Females).

TABLE 5

Gender Associated with Occupations

Male	Female	Both
Stage Director	Social Director	Chairperson
Park Recreation Leader		Counselor
Chemist		Tax Consultant
Electronic Technician		Travel Consultant
IBM Equipment Operator		Editor
Sales Manager		Archaeologist
President		Photographer
Orchestra Conductor		Novelist
Airplane Technician		Composer
Probation Officer		Doctor
Motion Picture Executive		Economic Advisor
Marine Scientist		Artist
Astronaut		Humanitarian
Professor		Psychiatric Case Worker
Engineer		Computer Operator
Race Driver		Advertising Agent
Business Leader		
Government Leader		
Science Researcher		
Forest Ranger		

Posttest

By Interest Cluster. The posttest was analyzed in the same manner as the pretest. According to interest cluster, three areas were considered disproportionate in composition by gender. Three areas were considered male dominated: Organizational 81.25% male, 18.75% female; Scientific 90% male, 10% female; and Technical and Applied 90% male, 10% female. Two areas appeared to be fairly sex balanced: Creative 58.8/41.2 and Promotional 46.7/53.3 (See Table 6).

Four of the six interest clusters made shifts toward being more sex balanced. The composition of the Social Service cluster increased its male representation by 8.7%, a shift toward being sex balanced. Technical and Applied cluster increased its female representation by 3.5%; Promotional cluster increased its female representation by 2.3%, with both resulting in movement toward being more sex balanced. Although slight, Creative increased its male representation by 1.2% which is another positive movement.

Negative shifts occurred resulting in a greater sex segregation in two Interest Clusters. The Scientific cluster became more sex biased due to a decline of 6.7% in female responses.

A reversal occurred in the Organizational cluster. Pretest results showed this as being one of the more sex balanced interest clusters (42.9/57.1). However, 24.2% females shifted away from Organizational making it a male dominated area in the posttest results.

TABLE 6

Results by Interest Cluster

	Pretest			Posttest				
Interest Cluster	% Female	% Male	Gender Assoc.	% Female	% Male	Gender Assoc.	% Changed	Positive or Negative shift
Social Service	80.3	19.7	F	71.6	28.4	N	+ 8.7	+
Creative	60.0	40.0	N	58.8	41.2	N	+ 1.2	+
Organizational	42.9	57.1	N	18.75	81.25	M	-24.2	-
Scientific	16.7	83.3	M	10.0	90.0	M	- 6.7	-
Promotional	44.4	55.6	N	46.7	53.3	N	+ 2.3	+
Technical and Applied	6.4	93.6	M	10.0	90.0	M	+ 3.6	+

By Gender. In examining the results by gender, 61.1% of the females rated highest in the Social Service cluster. The second highest cluster was Creative with 24.4%. Twenty-five (25%) of the males rated highest in Technical & Applied with 22.1% of the males in the Social Service cluster. Both Creative and Promotional clusters received expected percentages if averaged over all six clusters. Creative received 17.3% and Promotional 16.3% of male students' choices (See Table 7).

Promotional, Technical, and Scientific were all under represented by females. Both males and females were under represented in the Organizational cluster. The majority of females were located in two clusters: Social Service and Creative. The males, however, were spread over all six clusters more evenly and displayed a wider range of occupational choices.

The top interest cluster for males, TEC, declined by 37.5%; that decline was spread throughout the remaining five clusters with increases ranging from 1% to 12.5%. Both CRE and PRO gained 12.5%. Social Service remained the second occupational choice of males which increased by 6.7%. SCI increased by 4.8% and ORG by 1.0%.

TABLE 7

Results by Gender

Females				Males			
Pretest		Posttest	% of Change	Pretest		Posttest	% of Change
SS	73.3	SS 61.1	- 12.2	TEC	62.5	TEC 25.0	- 37.5
CRE	12.2	CRE 24.4	+ 12.2	SS	15.4	SS 22.1	+ 6.7
ORG	6.7	PRO 8.9	+ 3.3	ORG	7.7	CRE 17.3	+ 12.5
PRO	5.6	TEC 2.2	+ 1.1	SCI	5.8	PRO 16.3	+ 12.5
SCI	1.1	ORG 2.2	- 4.5	CRE	4.8	SCI 10.6	+ 4.8
TEC	1.1	SCI 1.1	----	PRO	3.8	ORG 8.7	+ 1.0

Ranking

The order of the top two ranking interest areas for both men and women remained the same; however, the percentage of students choosing the top interest area for both sexes declined.

Social Service, the top occupational choice of females, decreased by 12.2%; that 12.2%, however, seemed to have shifted directly down to the second area of interest, Creative, which increased by 12.2%. Promotional and Technical both made slight gains in choice, 3.3% and 1.1% respectively. Those figures accounted for the decline of 4.5% in Organizational. There was no change in the percentage of females who selected Scientific (See Table 8).

TABLE 8

Ranking of Interest Clusters by Gender

	Females		Males	
Cluster	Pretest	Posttest	Pretest	Posttest
Social Service	1	1	2	2
Creative	2	2	5	3
Organizational	3	4.5	3	6
Promotional	4	3	6	4
Scientific	5.5	6	4	5
Technical and Applied	5.5	4.5	1	1

Analysis of Shifts in Responses

A detailed look at just those students who shifted responses on the posttest shows that 23.3% of the females shifted to a different interest cluster. Fifty-one per cent (51%) of the males shifted to a different interest cluster.

Females. The greatest area of movement for females was out of SS; 16.7% shifted away from that cluster on the posttest. The greatest movement toward a cluster was a 12.2% shift into CRE. One and one-tenth per cent (1.1%) of the females moved out of Science, but another 1.1% shifted into SCI leaving a net gain of zero in that cluster. No females left the CRE or TEC clusters. No females entered the ORG clusters, leaving three cells in which there was no movement (See Table 9).

Males. Males showed a greater degree of movement than females. There was movement out of all six clusters, as well as movement into all six clusters. The greatest area of movement for males was out of TEC; 77.4% of males shifted out of TEC. All the remaining clusters showed some movement out of those areas, with the greatest being 7.5% out of ORG and as little as 1.9% out of CRE. Both PRO and SCI showed a loss of 3.8%.

The two areas which gained the greatest per cent of shifts into a cluster where PRO and CRE. PRO gained 28.3% of male shifts; CRE gained 26.4%. Moderate movement was into SS (18.9%) and SCI (13.2%). Some movement was into ORG (9.4%) and TEC (3.8%).

TABLE 9

Analysis of Shifts in Responses

	Female Shifts (21)			Male Shifts (53)		
Cluster	Out of	Into	Net gain/loss	Out of	Into	Net gain/loss
SS	-16.7% (15)	+3.3% (3)	- 13.4%	-5.7% (3)	+18.9% (10)	+ 13.2%
CRE		+12.2% (11)	+ 12.2%	-1.9% (1)	+26.4% (14)	+ 24.5%
ORG	-4.4% (4)		- 4.4%	-7.5% (4)	+ 9.4% (5)	+ 1.9%
PRO	-1.1% (1)	+4.4% (4)	+ 3.3%	-3.8% (2)	+28.3% (15)	+ 24.5%
SCI	-1.1% (1)	+1.1% (1)	0.0%	-3.8% (2)	+13.2% (7)	+ 9.4%
TEC		+1.1% (1)	+ 1.1%	-77.4% (41)	+ 3.8% (2)	- 73.6%

CHAPTER V

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Discussion

The purpose of this study was to investigate the effects of sex-biased and sex-fair item selections on interest inventory results. Students in grades 8-12 were given the VIP Interest Inventory as a pretest. A survey was administered to 248 high school students to determine whether item selections from the VIP Interest Inventory were sex biased or sex fair (neutral). The VIP Interest Inventory was then revised using sex-fair item selections, which was then administered as a posttest.

The objectives of the study were: 1) To determine whether item selections in the VIP Interest Inventory were sex biased; 2) to revise the VIP Interest Inventory to include only sex-fair item selections; and 3) to determine whether the use of sex-fair item selections expand the career options of males and females.

Several counselors who use the VIP Interest Inventory in their career counseling expressed concern that the instrument was producing sex-biased results. They felt that the results were pigeon holing females into Social Service careers and males into Technical and Applied careers. A quick examination of 896 inventories on file in the Career Guidance Center office confirmed their concern. Eighty-five per cent (85%) of the females rated highest in SS, and 94% of the males rated highest in TEC. This information seemed significant enough to warrant the present study, since results of this Interest Inventory are

frequently used in academic advising. Disproportionate enrollments, especially in vocational courses, could easily result.

In reviewing high school enrollment in vocational courses, Matthews and McCune (1978) found that females enrolled most frequently in the program areas which are traditionally feminine--home economics, health, homemaking--and males in areas traditionally masculine--technical, trades, industrial, and agriculture. These stereotyped enrollments in vocational education discourage both females and males from exploring a full range of possible interests and from gaining a variety of skills needed inside, as well as outside, the home. Females in particular are being hurt by stereotyping, which limits their opportunity for well-paying jobs. Because of these long reaching effects, the Illinois State Board of Education advocates that, if a vocational education program disproportionately enrolls male or female students, steps must be taken to insure it is not the result of unlawful discrimination in counseling practices.

Pretest results concurred with counselor suspicions that the VIP Interest Inventory was showing limited career options for males and females. In viewing the data by cluster, SS was a female-dominated interest area, consisting of 80.3% female and 19.7% male. Male-dominated clusters were TEC with 83.3% males and 16.7% females and SCI with 93.6% males and 6.4% females. Not only were half of the six interest areas sex biased, but also the limiting effects were seen when results were examined by gender. Seventy-three and three-tenths per cent (73.3%) of all females expressed interest in just one of the six clusters, SS, the traditionally female cluster. The majority of males also were limited to just one interest area; 62.5% expressed interest in the traditionally male area of TEC.

Based on the results of the present investigation, it appeared that sex stereotyping was in fact manifesting itself in the VIP Interest Inventory. This had implications for two groups: 1) Illinois school counselors, in light of the policy statement by the Illinois State Board of Education regarding discrimination in counseling; and 2) high school students, regarding limited career opportunities and unexplored potential.

The results of the survey to determine the gender association of item selections in the VIP Interest Inventory found that 22 items were considered male and 20 were considered female. Only 54 of the 100 items regarding activities were considered gender neutral or sex fair. Of the 38 occupations listed as item selections, 20 were significantly associated with males and 1 with females. Sixteen (16) were considered sex fair or neutral.

In conclusion, 50.7% of the items were considered sex fair. With nearly half (45.7%) of the questions being significantly sex biased, it appeared likely that the sex stereotyped inventory responses resulted from sex-biased item selections.

Item selections on the VIP Interest Inventory were revised, based on work done by Bem (1974), Panek et al. (1977), & Zimet and Zimet (1977). It was hypothesized that an interest inventory with sex-fair item selections would produce results which were more gender balanced.

The posttest results indicated positive movement toward greater gender balance in four of the six clusters. An 8.7% movement occurred in the SS cluster which shifted that interest area from being sex biased to the neutral category. Both the CRE and PRO clusters remained neutral, although slight shifts occurred moving them more toward a 50/50

split. Although TEC remained a male-dominated cluster, the gap between males and females diminished slightly by 3.6%.

An unexpected shift occurred in the SCI cluster. It remainded a male- dominated area; however, female interest actually decreased by 6.7% making the imbalance even greater. Also, an unpredicted shift occurred in the ORG cluster which in the pretest was quite evenly balanced with a 42.9% female/57.1% male composition. ORG moved from a neutral cluster to a male-dominated cluster because of a 24.2% shift.

A review of posttest results by gender indicated SS continued to be the top one choice of females, although it did decline by 12.2%. That 12.2%, however, shifted directly to choice number two of females, CRE. Although it continued to be choice two, it gained 12.2%. TEC doubled its pretest response rate, and it shifted from 6th place rank to 4th place. ORG downshifted from 3rd to 5th place rank. There was no movement in the SCI cluster, which remained last with only 1.1% of females selecting this area. Although sex-fair item selections caused a significant movement of females out of SS, 85.5% of the females remained in only two of the six clusters.

Interestingly, the use of sex-fair words seemed to have its greatest impact on males. Thirty-seven and one-half per cent (37.5%) of males moved out of the traditionally-male TEC cluster. That 37.5% was redistributed in all five remaining clusters. Male interests were fairly evenly distributed with the highest ranking 25% and the lowest ranking 8.7%. Males are much less constricted in career options and had a far greater range of choice than females.

Conclusion

Overall, results of the present investigation appeared to indicate that the use of sex-fair item selections resulted in a wider range of career options for males than for females. The use of non-sexist items apparently failed to expand the range of interest areas for females, whose responses remained limited to two traditionally female-dominated clusters.

At the National Institute of Education in Washington, D.C., John Holland (1974) presented his conclusions to the Workshop on Sex Bias and Sex Fairness in Career Interest Inventories. He stated:

> ...Charges of sex bias in interest inventories rest on imagined effects and words assumed to be offensive to women... The distributions of vocational aspiration among men and women differ because men and women have different life histories, not because interest inventories possess sex-biased characteristics. Changing women's lives will change their scores (p. 27).

Evidence seems to indicate sex differences continue to exist today with little progress taking place. Herzog (1982) found sex differences have existed over the past few decades in career values, preferences for occupations, and pre-vocational activities, and choice of college majors. Rytina & Bianchi (1984) found that men were no more likely to be employed in female-dominated occupations in 1980 than in 1970; additionally, the proportion of women in male-dominated occupations in the past decade had not shifted either. This may reflect, as reported by Gottfredson (1982) that widely divergent interest patterns of males and females merely reflect real sex differences in vocational interests. Concluding that interest inventories showing large sex differences are biased assumes that there are

few, if any, real sex differences in vocational interests, which may be erroneous thinking.

Historically, occupations have been filled by one gender which leads to the exclusion of the other. Although society has removed institutional and legal barriers which prevented students from choosing nontraditional career programs, society has failed to change attitudinal barriers which continue to prevent students from selecting from a wide range of occupations (Duo & Yuen, 1985). Complex social and psychological barriers continue to limit students' choices of careers based on gender. The major deterrent to females entering male-dominated career fields appears to be psychological and cultural harriers imposed by society (Thomas, 1981). These differences are a result of sex-role stereotyping which begins in early childhood and culminates during adolescence. Books, television and parental attitudes are major socializing forces.

Television. Ninety-seven per cent of all American homes have one or more TV sets. The average set is turned on 6 hours and 49 minutes per day. By the time a student graduates from high school, he will have spent roughly 11,000 hours in the classroom and 15,000 hours in front of the television. The effects of television cannot be taken for granted. A 1975 Public Broadcast Service Task Force on Women in Public Broadcasting stated that "the portrayal of women and girls through the media is a dynamic force in determing attitudes about women, and television in particular is a major socializing agent."

An analysis of Sesame Street showed that, although women make up slightly more than half the population, only 20% of all characters were female; when women were shown, they were in passive roles or else

involved in teaching. Men were shown in active roles three times more than females, often involved with initiating an activity, or in themes associated with career awareness, reasoning or problem solving. Males were also shown for longer periods of time than females.

Regarding television as a whole, men are seen in a diversity of occupations, nearly twice the number of those held by women characters. Three-quarters of the adult males are shown supporting a family; however, only one-third of the adult females were portrayed as working outside the home (Bonk & Gardner, 1977).

Picture books. Weitzman et al. (1977) examined award-winning picture books for preschool children. They found women were greatly under represented in the titles, central roles, and illustrations (ratio of 12:1); when women did appear, traditional sex-role stereotypes were reinforced. Boys were active and adventurous; girls were passive, often pictured indoors, restricted by their clothing--skirts and dresses. Fathers are pictured in a variety of interesting occupations. Although nine out of ten women will work in their lifetime, not one mother is depicted as employed; all are pictured as fulltime mothers doing housework.

Textbooks. School textbooks appeared to be just as limiting as preschool picture books, yet just as powerful in limiting sex-role expectations based on preconceived stereotypes. Burton (1974) found that textbooks fostered the development of personality traits as well as socializing boys and girls into future work roles. In analyzing 135 reading textbooks, women were portrayed in only 26 occupations, while men were found in 147 different jobs. Furthermore, the women's jobs were traditionally female occupations, such as, teacher, nurse,

dressmaker, and telephone operator. A review of social studies texts resulted in similar findings; over 100 occupations were associated with men and less than 30 for women.

Frazier and Sadker (1973) found the following key points regarding sex differences and education: By upper elementary school, girls' future occupations are limited to four areas--teacher, nurse, secretary, or mother. Girls are unable to describe specifics about job duties and activities; boys, in contrast, are able to describe in detail the activities of their chosen career. Grade school boys have positive feelings about being male; in contrast, girls are less confident about themselves. As they progress through school, their opinion of boys become higher and their opinion of girls become lower. During high school, girls' ability tests begin to decline, especially in math.

Adolescent Gender Identity. High school girls express a decline in career commitment; this decline is related to feelings that boys disapprove of intelligent women. Although women make better high school grades, they are less likely than boys to believe in their ability to do college work. Of the brighter high school grads who do not go on to college, 75%-90% are women. Gottfredson (1981) also found that sex differences in vocational preferences which develop and are reinforced from early childhood result in large and stable sex differences by adolescence. Gottfredson (1982) also believes that vocational preferences may even help to consolidate gender identity which is one of the central aspects of self-concept. Since self-concept is tied to vocational interests and activities, gender and occupational identity are strongly linked.

Parental Activities. In addition to television, books, and adolescent development of gender identity as important influences in sex-role stereotyping, parents have been identified as paying a key role in an adolescent's career choice (Kane et al., 1976; Lewis & Kaltreider, 1976). Despite parents' predominant influence, their lack of current occupational information limits their ability to help their children choose from a wider array of careers. As a result, Jolley (1975) and Handley & Walker (1978) noted that the sex stereotyping and sex bias of parents continue to influence students to chose from traditional vocational programs.

Although parental influences are important in determining career preference upon entering college, this influence is likely to diminish as the child progresses through college, especially for females. For example, Weidman (1982) found that the college experience had a positive effect on females ultimate career choice. In fact, the longer the female student was exposed to college, the more career aspirations increased. As women experience academic (as opposed to social) successes, they build confidence in themselves. These college successes help females adjust their aspirations upward and to aspire to higher-status careers.

A recent study compared women in traditional and nontraditional careers (Wilson, Weikel, & Rose, 1982) and found maturity may be a key factor in nontraditional career selection. Most of the nontraditional career women chose their careers after marriage. Most of the traditional women stated their parents as key individuals supportive of their career decisions; however, few nontraditional women named their parents. It appears that husbands of the nontraditional women

suppported their wives in pursuing nontraditional careers and actually served as their mentors.

In conclusion, the present study found that the revision of sex-biased to sex-fair item selections on interest inventories appeared to assist high school males to explore a wider range of career opportunities while sex-fair wording had little effect on expanding the options of high school females. Perhaps one reason the wording had little effect on females is because the socialization of females in our society creates deep and long lasting effects which limit and constrict the potential of young women. Therefore, until the life experiences of females change dramatically, true gender differences will continue to appear in career development.

Recommendations

Positive Steps. Changing the environment is required before we can change personal attitudes. The fact that women in nontraditional occupations chose their careers after marriage supports the need to expand awareness of nontraditional careers for females in elementary through high school (Wilson, Weikel & Rose, 1982).

To further substantiate the above, Ragland (no date) states:

> To break free of the traditional sex role stereotypes a boy needs to know that he does not have to be stronger and braver and better than any girl or risk losing his sexual identity, and a girl needs to know that she does not have to be, or pretend to be, more delicate, timid and dependent than any boy in order to be a "real" girl. Educators can create an environment in which girls and boys, young women and young men, all develop their individual physical and intellectual strengths, share leadership roles and work as partners in curricular and extracurricular activities.

Although counselors are concerned with increasing awareness of widening career options for both males and females, little empirical research has been conducted regarding materials and activities which promote sex-fair career counseling (Hawley & Even, 1982).

The following activities are designed for counselors to be implemented in a school setting:

Counselor as Consultant

1. Provide a teacher inservice to help the classroom teachers examine his/her attitudes and actions toward their students, male and female (K-12). Discuss sex equity issues/activities.
2. Develop a community resource directory of successful people employed in nontraditional careers. Encourage teachers to bring these people into the classroom as role models (K-12).
3. Encourage teachers to examine curriculum materials--textbooks, filmstrips, posters--for sex bias. Offer suggestions on how to use biased materials in an unbiased way.
4. Provide information, materials, and activities to the classroom teachers. Encourage them to discuss the role of women in history and literature.
5. Encourage the school librarian to order books about famous women and children's books which include female names in the title, females as heroines or central characters.
6. Offer seminars for parents to discuss the role of sex-role stereotyping on career selection. Help parents offer support to their children in exploring nontraditional options. Discuss the economic aspect, i.e., female jobs are traditionally low-paying.

Counselor in the Classroom

1. Lead a class discussion of the changing roles of men and women in contemporary society. (K-12)
2. Provide students with opportunities to try out nontraditional experiences, e.g., boys sewing, girls carpentry (K-12).
3. Encourage students to examine and analyze television shows, advertizing, magazines, books, movies, and records for sex bias. (K-12)
4. Observe National Women's History Week. Provide classroom activities and discussion based on these materials.
5. Show films/filmstrips on a variety of careers to expand career options of both males and females. Discuss sex role issues in regard to each career field.

Counselor Activities

1. Provide a career day using nontraditional role models.
2. Organize field-trips in which students will observe men and women in nontraditional work settings.
3. Provide shadowing experiences for students who are considering a nontraditional career field.
4. Encourage girls to increase their skill development in math and science. Recommend remedial help if necessary to build confidence.
5. Develop or purchase slide/tapes, brochures and posters which present students in nontraditional vocational programs.
6. Encourage nontraditional enrollment in vocational classes.
7. Spotlight current nontraditional students; use them as in-school role models via bulletin board displays, school newspaper, stories, etc.

8. Ask former high school students in nontraditional jobs or training/education programs to return for an "alumni day."
9. Publicize success stories of people in nontraditional careers--in the community, parents, recent alumni or current students.
10. Discuss the stereotyping effects of socialization on interest inventory results. Encourage students to also consider careers in their second or third choice interest areas.
11. Provide students with career information free from sex bias.
12. Females who plan to terminate their education at the high school level need special assistance in exploring nontraditional options.

Women, like all groups whose vocational development has been arrested, need special help in stretching, in raising their aspiration level, in raising their consciousness. Consciousness raising does not mean that every woman must aspire to enter "masculine" fields or even to achieve in a career. It means simply that women should be helped to free themselves to dream (Schlossberg, 1972, p. 139).

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APPENDIX A

CAREER GUIDANCE CENTER NETWORK

Career Guidance Centers

Jack Witkowsky, Chairman
State Board of Education

Joseph M. Cronin
State Superintendent of Education

Illinois Office of Education
Department of Adult, Vocational
and Technical Education

100 North First Street
Springfield, Illinois 62777
Phone (217) 782-4870

6/26/78

The Illinois Office of Education, Department of Adult, Vocational and Technical Education, initiated the establishment of nineteen Career Guidance Centers in January, 1978. These centers are located throughout Illinois and provide a variety of career guidance services to all local educational agencies, both public and private universities and colleges, as well as other public and private agencies involved in career guidance, and to out-of-school youth and adults.

The staff of these centers are working toward improving the delivery of career guidance services to all individuals, enabling them to make more knowledgeable and realistic career decisions.

This publication provides an overview of some of the basic questions and answers about the Illinois Career Guidance Centers.

Joseph M. Cronin

Joseph M. Cronin
State Superintendent of Education

Why

The need to improve career guidance services for youth and adults in Illinois is reflected in the findings of evaluations of vocational education conducted over the past eight years.

During 1977, the state educational agency initiated a comprehensive external assessment study of the adult, vocational and technical education programs, services and delivery systems for providing assistance to local educational agencies. The program/service areas in which the largest percentage of administrators, planners, teachers and guidance personnel desired additional assistance included placement and vocational guidance and counseling activities. These findings have further substantiated the need for establishing Career Guidance Centers in Illinois.

About the Cover
The cover design represents a concept involving direction, growth and improvement of career guidance services in the State of Illinois.

What

The twofold mission of the Career Guidance Centers is to assist public and private educational agencies in the improvement of career guidance services for students and to provide specialized guidance services for out-of-school individuals.

Recent federal legislation for vocational education (Education Amendments of 1976, P.L. 94-482) has generated funds and guidelines for the provision of career guidance and counseling services. The functions of the Career Guidance Centers encompass this legislation which includes:

- Assistance in developing quality career guidance and counseling programs.
- Assistance in providing educational and job placement services.
- Assistance in working with the unique career guidance needs of youth and adult offenders, limited English-speaking persons, and out-of-school persons.
- Assistance in recognizing the changing work patterns of women and effectively overcoming sex role stereotyping.
- Providing leadership for career guidance programs at the local level.

The nineteen centers are implementing these goals in a variety of ways, utilizing existing resources and establishing services/activities that will best meet the unique needs of the population in their respective geographical area.

Where

1. Highland Community College
   Pearl City Road
   Freeport, IL 61032
   815/235-6121

2. Courthouse - Room 712
   400 West State Street
   Rockford, IL 61101
   815/987-3080

3. Lake County Area Vocational Center
   19525 West Washington
   Grayslake, IL 60030
   312/223-6666

4. Kishwaukee College
   Malta, IL 60150
   815/825-2086 Ext. 348

5. Nash School
   Fifth and Madison Streets
   Oregon, IL 61061
   815/732-7251

6. College of DuPage
   22nd Street & Lambert Road
   Glen Ellyn, IL 61037
   312/858-2800 Ext. 2230

7. Triton College
   2000 Fifth Avenue
   River Grove, IL 60171
   312/456-4550 Ext. 536

8. Chicago City-Wide College
   185 North Wabash Avenue
   Chicago, IL 60601
   312/977-2542

9. Thornton Community College
   15800 South State Street
   South Holland, IL 60473
   312/596-2000 Ext. 314/342

10. Joliet Junior College
    1216 Houbolt Avenue
    Joliet, IL 60436
    815/729-9020 Ext. 408

11. Trading Post Building, Room 202
    304 North Maple Street
    Urbana, IL 61801
    217/384-3599

12. Learning Resource Center
    Lake Land College
    Mattoon, IL 61938
    217/235-3131

13. Washington School
    114 East Washington Avenue
    Flora, IL 62839
    618/662-4478

14. Alexander-Pulaski Vocational Center
    2nd & Washington Streets
    Tamms, IL 62988
    618/747-2726

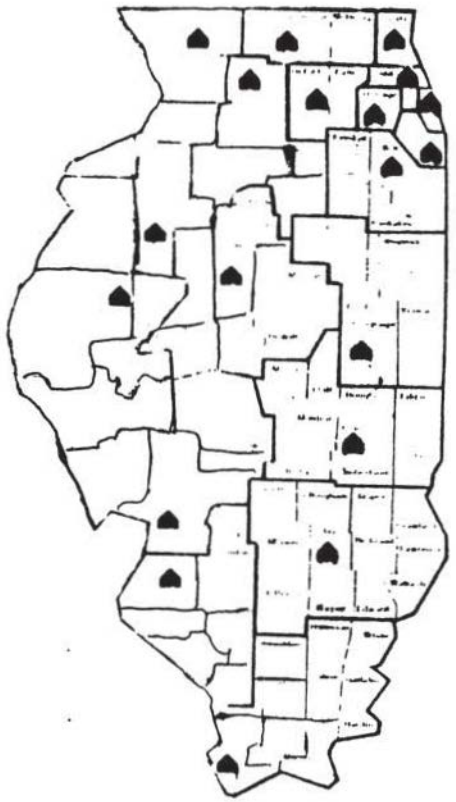
15. Belleville Area College
    2500 Carlyle Road
    Belleville, IL 62221
    618/235-2700 Ext. 344

16. Lewis & Clark Community College
    5800 Godfrey Road
    Godfrey, IL 62035
    618/466-3411 Ext. 440

17. Educational Service Region
    McDonough County
    130½ South Lafayette
    Macomb, IL 61455
    309/837-4821

18. Illinois Central College
    East Peoria, IL 61635
    309/694-5296

19. Carl Sandburg College
    S. Lake Storey Road
    Galesburg, IL 61401
    309/344-3631



Interested? For further information contact: The Career Guidance Center in your area or The Department of Adult, Vocational and Technical Education/Illinois Office of Education at 217-782-5098

APPENDIX B

NATIONAL INSTITUTE OF EDUCATION GUIDELINES FOR ASSESSMENT OF SEX BIAS AND SEX FAIRNESS IN CAREER INTEREST INVENTORIES

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
WASHINGTON, D.C. 20208

First edition
July, 1974

GUIDELINES FOR ASSESSMENT OF SEX BIAS AND SEX FAIRNESS IN CAREER INTEREST INVENTORIES

The attached guidelines have been developed as part of the National Institute of Education (NIE) Career Education Program's study of sex bias and sex fairness in career interest inventories. They were developed by the NIE Career Education Staff and a senior consultant and nine-member planning group of experts in the fields of measurement and guidance, appointed by NIE. The draft guidelines were discussed in a broadly representative three-day workshop sponsored by NIE in Washington, D. C., in March 1974. Through successive revised drafts, culminating in this edition of guidelines, the diverse concerns of inventory users, respondents, authors, and publishers were taken into consideration and resolved as far as possible.

During the development of the guidelines, the following working definition of sex bias was used:

> Within the context of career guidance, sex bias is defined as any factor that might influence a person to limit--or might cause others to limit--his or her considerations of a career solely on the basis of gender.[1]

The working definition expresses the primary concern that career alternatives not be limited by bias or stereotyped sex roles in the world of work.[2] The guidelines represent a more specific definition than

previously available of the many aspects of sex fairness in interest inventories and related interpretive, technical, and promotional materials. The issues identified in the course of guideline development are dealt with in commissioned papers to be published by the U. S. Government Printing Office as a book, Issues of Sex Bias and Sex Fairness in Career Interest Measurement, available from the Career Education Program, National Institute of Education, Washington, D. C. 20208, in March 1975.

The term "career interest inventory," as used in these guidelines, refers to various formal procedures for assessing educational and vocational interests. The term includes but is not limited to nationally published inventories. The interest assessment procedures may have been developed for a variety of purposes and for use in a variety of settings. The settings include educational and employment-related settings, among others, and the uses include career counseling, career exploration, and employee selection (although the latter may also involve other issues of sex bias in addition to those discussed here).

The guidelines do not represent legal requirements. They are intended as standards a) to which we believe developers and publishers should adhere in their inventories and in the technical and interpretive materials that the American Psychological Association (APA) Standards for Educational and Psychological Tests (1974) requires them to produce, and b) by which users should evaluate the sex fairness of available inventories. There are many essential guidelines for interest inventories in addition to those relating to sex fairness. The

guidelines presented here do not replace concerns for fairness with regard to various ethnic or socioeconomic subgroups. The guidelines are not a substitute for statutes or Federal regulations such as the Equal Employment Opportunity Commission (EEOC) selection guidelines (1970) and Title IX of the Education Amendments of 1972 (1972), or for other technical requirements for tests and inventories such as those found in the APA standards. The guidelines thus represent standards with respect to sex fairness, which supplement these other standards.

The guidelines address interest inventories and related services and materials. However, sex bias can enter the career exploration or decision process in many ways other than through interest inventory materials. Several of the guidelines have clear implications for other materials and processes related to career counseling, career exploration, and career decision-making. The spirit of the guidelines should be applied to all parts of these processes.

The guidelines are presented here in three sections: I, The Inventory Itself; II, Technical Information; III, Interpretive Information.

I. The Inventory Itself

A. The same interest inventory form should be used for both males and females unless it is shown empirically that separate forms are more effective in minimizing sex bias.

B. Scores on all occupations and interest areas covered by the inventory should be given for both males and females, with the sex composition of norms--i.e., whether male, female, or combined sex norms--for each scale clearly indicated.

C. Insofar as possible, item pools should reflect experiences and activities equally familiar to both females and males. In instances where this is not currently possible, a minimum requirement is that the number of items generally favored by each sex be balanced. Further, it is desirable that the balance of items favored by each sex be achieved within individual scales, within the limitations imposed by validity considerations.

D. Occupational titles used in the inventory should be presented in gender-neutral terms (e.g., letter carrier instead of mailman), or both male and female titles should be presented (e.g., actor/actress).

E. Use of the generic "he" or "she" should be eliminated throughout the inventory.

II. Technical Information

A. Technical materials provided by the publisher should describe how and to what extent these guidelines have been met in the inventory and supporting materials.

B. Technical information should provide the rationale for either separate scales by sex or combined-sex scales (e.g., critical differences in male-female response rates that affect the validity of the scales vs. similarity of response rates that justify combining data from males and females into a single scale).

C. Even if it is empirically demonstrated that separate inventory forms are more effective in minimizing sex bias, thus justifying their use, the same vocational areas should be indicated for each sex.

D. Sex composition of the criterion and norm groups should be included in descriptions of these groups. Furthermore, reporting of scores for one sex on scales normed or constructed on the basis of data from the other sex should be supported by evidence of validity--if not for each scale, then by a pattern of evidence of validity established for males and females scored on pairs of similar scales (male-normed and female-normed, for the same occupation).

E. Criterion groups, norms, and other relevant data (e.g., validity, reliability, item response rates) should be examined at least every five years to determine the need for updating. New data may be required as occupations change or as sex and other charac-

teristics of persons entering occupations change. Text manuals should clearly label the date of data collection for criterion or norm groups for each occupation.

F. Technical materials should include information about how suggested or implied career options (e.g., options suggested by the highest scores on the inventory) are distributed for samples of typical respondents of each sex.

G. Steps should be taken to investigate the validity of interest inventories for minority groups (differentiated by sex). Publishers should describe comparative studies and should clearly indicate whether differences were found between groups.

A. The user's manual provided by the publisher should describe how and to what extent these guidelines have been met in the inventory and the supporting materials.

B. Interpretive materials for test users and respondents (manuals, profiles, leaflets, etc.) should explain how to interpret scores resulting from separate or combined male and female norms or criterion groups.

C. Interpretive materials for interest inventory scores should point out that the vocational interests and choices of men and women are influenced by many environmental and cultural factors, including early socialization, traditional sex-role expectations of society, home-versus-career conflict, and the experiences typical of women and men as members of various ethnic and social class groups.

D. Manuals should recommend that the inventory be accompanied by orientation dealing with possible influences of factors in C above on men's and women's scores. Such orientation should encourage respondents to examine stereotypic "sets" toward activities and occupations and should help respondents to see that there is virtually no activity or occupation that is exclusively male or female.

E. Interpretive materials for inventories that use homogeneous scales, such as health and mechanical, should encourage both sexes to look at all career and educational options, not just

those traditionally associated with their sex group, within the broad areas in which their highest scores fall.

F. Occupational titles used in the interpretive materials and in the interpretation session should be stated in gender-neutral terms (e.g., letter carrier instead of mailman) or both male and female titles should be presented (e.g., actor/actress).

G. The written discussions in the interpretive materials (as well as all inventory text) should be stated in a way which overcomes the impression presently embedded in the English language that a) people in general are of the male gender, and b) certain social roles are automatically sex-linked.

H. The user's manual a) should state clearly that all jobs are appropriate for qualified persons of either sex; and b) should attempt to dispel myths about women and men in the world of work that are based on sex-role stereotypes. Furthermore, ethnic occupational stereotypes should not be reinforced.

I. The user's manual should address possible user biases in regard to sex roles and to their possible interaction with age, ethnic group, and social class, and should caution against transmitting these biases to the respondent or reinforcing the respondent's own biases.

J. Where differences in validity have been found between dominant and minority groups (differentiated by sex), separate interpretive procedures and materials should be provided that take these differences into account.

K. Interpretive materials for respondent and user should encourage exploratory experiences in areas where interests have not had a chance to develop.

L. Interpretive materials for persons re-entering paid employment or education and persons changing careers or entering post-retirement careers should give special attention to score interpretation in terms of the effects of years of stereotyping and home-career conflict, the norms on which the scores are based, and the options such individuals might explore on the basis of current goals and past experiences and activities.

M. Case studies and examples presented in the interpretive materials should represent men and women equally and should include but not be limited to examples of each in a variety of non-stereotypic roles. Case studies and examples of mature men and women and of men and women in different social class and ethnic groups should also be included where applicable.

N. Both user's manuals and respondent's materials should make it clear that interest inventory scores provide only one kind of helpful information, and that this information should always be considered together with other relevant information--skills, accomplishments, favored activities, experiences, hobbies, influences, other test scores, and the like--in making any career decision. However, the possible biases of these variables should also be taken into consideration.

APPENDIX C

VIP INTEREST INVENTORY

1. **The one set of adjectives which best describe me is:**

   A. **sensitive and creative**
   B. **helpful and interested in people**
   C. **intellectual and interested in science**
   D. **practical and interested in mechanical things**
   E. **well organized and good at following directions**
   F. **outgoing in personality and good in influencing others**

2. **The occupation which appeals to me most is:**

   A. **stage director**
   B. **park recreation leader**
   C. **chemist**
   D. **electronics technician**
   E. **IBM equipment operator**
   F. **sales manager**

3. **When I have a problem, I usually:**

   A. **act on the basis of my feeling**
   B. **ask a number of my friends to help me**
   C. **think through all the possibilities and make a logical choice**
   D. **take the most practical solution**

4. **I think that other people consider me to be:**

   A. **impulsive and original in thinking**
   B. **idealistic and successful as a leader**
   C. **independent and scholarly**
   D. **practical and have common sense**
   E. **well organized and hard working**
   F. **popular and adventurous**

5. **I am happiest when:**

   A. **I can do some creative work alone**
   B. **I can help someone**
   C. **I can work alone on a science or math problem**
   D. **I can fix something**
   E. **I can do some assigned work well**
   F. **I can sell a new idea to someone**

6. **The one word that describes me best is:**

   A. **artistic**
   B. **social**
   C. intellectual
   D. practical
   E. dependable
   F. forceful in personality

7. **In my spare time,** I would most like to:

   A. **write a story,** draw a picture, or play the piano
   B. **be a guide for** a new student
   C. **do a lot of experiments** or read about space exploration
   D. **repair an engine** or make jewelry
   E. **organize a scrap** book or photo album
   F. **give a campaign** speech or make a sales pitch

8. **I would dislike most:**

   A. **having to work** with a group of people on a project
   B. **working alone** on a project
   C. **selling things** door to door
   D. **getting dressed** up
   E. **giving a party for** a lot of people whom I don't know
   F. **solving puzz les** that require a lot of concentration

9. **I feel most uncomfortable:**

   A. **participating** in sports
   B. **doing a job with little** recognition
   C. **leading others**
   D. **teaching others**
   E. **picking my own** topic for a report
   F. **keeping careful** records

10. **If school were** dismissed this afternoon and I could only do one of **these things,** I would:

   A. **paint or draw**
   B. **look for a group** of friends to be with
   C. **do some experiments** on my chemistry set
   D. **train animals**
   E. **teach myself** to type
   F. **promote a neighborhood** talent show

11. **If I were offered** six kinds of jobs, I would prefer to:

   A. **write/produce** a TV program
   B. **counseling victims** and family
   C. **do scientific** research for a cure
   D. **build equipment** for a laboratory
   E. **supervise collection** of information about the causes of cancer
   F. **raise money** for a cancer benefit

12. I would most like to be:

A. an artist for the school paper or member of a musical organization
B. a tutor for a handicapped student
C. a member of a science or social studies club which does independent projects
D. a member of the football team
E. the school librarian's assistant
F. a student council officer

13. If I could have any position I want in a club, I'd prefer:

A. work with an advertising campaign
B. to be social director
C. to plan new projects for the club
D. to build the club's homecoming float
E. to be chairperson of rules and regulations committee
F. to be president

14. If I could be anything I'd like to be, I would choose:

A. orchestra conductor
B. counselor
C. chemist
D. airplane technician
E. tax consultant
F. travel consultant

15. If I had an offer of a job I'd like:

A. editor of a magazine
B. a juvenile delinquency expert for teenage groups
C. an archaeologist exploring ruins
D. famous photographer
E. efficiency expert planning the smooth working of a new industry
F. an executive with motion pictures

16. If I were on a committee to plan the float for a parade, I would like to be:

A. the one who thinks up the theme
B. the one who arranges for the cokes and hamburgers while the float is being built
C. the one who can analyze which plan to carry out
D. the one who actually builds the float
E. the one who divides and assigns jobs
F. the one in charge of getting everybody working and involved

17. If I were to work at the United Nations building in New York I'd prefer to work on:

A. programs for Radio Free Europe
B. children's emergency relief committee
C. committee for pollution control
D. committee for technical assistance to underdeveloped countries
E. committee for international financial stability
F. U. S. representative to the United Nations

18. If I were going to select a movie from those listed, I'd choose one about:

A. a novelist overcoming discouragement
B. a former delinquent group who work as aides to the police
C. a scientist's underwater explorations
D. an astronaut marooned in space
E. a clever person's rise to riches
F. a newcomer who fights against a dictatorship and corruption in South America

19. If I could only achieve one of the following, it would be most important:

A. to create something of great beauty
B. to improve the living conditions in a community
C. to discover a principle of science
D. to assemble a complicated piece of equipment
E. to be in charge of seeing that plans are organized and running
F. to be a good leader of a group of people

20. If only one of the following people's lives could be saved, I would choose:

A. world renowned conductor and composer
B. a doctor working in a ghetto
C. a professor who is an expert in rocketry
D. an engineer planning an urban transportation system
E. economic advisor to the world bank
F. president of a large computer corporation

21. The people I most admire are:

A. artists
B. great humanitarians
C. famous thinkers
D. famous race drivers
E. designers of mass production
F. business or government leaders

22. I am most proud of:

A. expressing something in a drawing, song, or poem
B. the help I give to others
C. ideas that I think up
D. things I make or build
E. my reputation for getting a job well done
F. winning a contest or competition

23. From my first impressions of the following jobs, I would choose:

A. stage director
B. psychiatric case worker
C. science research worker
D. forest ranger
E. computer operator
F. advertising agent

24. If the school adopts a rule which I dislike, I would:

A. disregard the rule and do what I feel is right
B. organize a group protest
C. go along with the rule while I'm in school

APPENDIX D

STUDENT SURVEY

SCHOOL _____

GRADE _____

AGE _____

SEX _____

INSTRUCTIONS: Certain kinds of experiences are more common for girls than for boys. Some experiences are equally common for both sexes. Mark which sex comes to your mind first when you read each of the following activities and occupations. Please mark down your first impression. Thank you!

ACTIVITIES

		Male	Female	Both
1.	Sensitive			
2.	Creative			
3.	elpful			
4.	Interested in People			
5.	Intellectual			
6.	Interested in Science			
7.	Practical			
8.	Interested in Mechanical Things			
9.	Well Organized			
10.	Good at Following Directions			
11.	Outgoing Personality			
12.	Good at Influencing Others			
13.	Act on Feelings			
14.	Ask Friends for Help			
15.	Think through all Possibilities			
16.	Make a Logical Choice			
17.	Take the most Practical Solution			
18.	Impulsive			
19.	Original Thinker			
20.	Idealistic			
21.	Successful as a Leader			
22.	Independent			
23.	Scholarly			
24.	Common Sense			
25.	Well Organized			
26.	Hard Working			
27.	Popular			
28.	Adventurous			
29.	Creative Work			
30.	Helping People			
31.	Working Alone			
32.	Science or Math Problems			
33.	Fix Something			
34.	Do Assigned Work Well			
35.	Sell New Ideas to People			
36.	Artistic			
37.	Social			
38.	Intellectual			
39.	Dependable			
40.	Forceful Personality			
41.	Write a Story			
42.	Draw a Picture			
43.	Play the Piano			
44.	Guide a New Student			
45.	Do Science Experiments			
46.	Read about Space Exploration			
47.	Repair an Engine			
48.	Make Jewelry			
49.	Organize a Scrap Book			
50.	Organize a Photo Album			

		Male	Female	Both
51.	Give a Campaign Speech			
52.	Make a Sales Pitch			
53.	Work with a Group of People on a Project.			
54.	Work alone on a Project			
55.	Sell Things Door to Door			
56.	Get Dressed Up			
57.	Give a Party for People Whom I Don't Know			
58.	Solving Puzzles			
59.	Concentrate			
60.	Participate in Sports			
61.	A Job with Little Recognition			
62.	Lead Others			
63.	Teach Others			
64.	Pick a Topic for a Report			
65.	Keep Careful Records			
66.	Paint a Picture			
67.	Be With a Group of Friends			
68.	Experiment With Chemistry Set			
69.	Train Animals			
70.	Teach Self to Type			
71.	Promote a Neighborhood Talent Show			
72.	Write/Produce a TV Program			
73.	Counsel Victims and Their Families			
74.	Do Scientific Research for a Medical Cure			
75.	Build Equipment for a Laboratory			
76.	Supervise Collection of Information About the Causes of Cancer			
77.	Raise Money For a Cancer Benefit			
78.	Artist for the School Paper			
79.	Member of a Musical Organization			
80.	Tutor a Handicapped Student			
81.	Member of a Science Club			
82.	Member of a Social Studies Club			
83.	Member of the Football Team			
84.	School Librarian's Assistant			
85.	Student Council Officer			
86.	Work on Advertising Campaign			
87.	Work on Homecoming Float			
88.	Thinks up Themes			
89.	Make Arrangements for Refreshment Stand			
90.	Divide and Assign Jobs to Others			
91.	Get Others Working and Involved			
92.	Express something in Song			
93.	Help Others			
94.	Think up Ideas			
95.	Build Things			
96.	Get a Job Well Done			
97.	Win A Contest or Compete			
98.	Disregard the Rules			
99.	Organize a Protest Group			
100.	Go Along With the Rule			

OCCUPATIONS

		Male	Female	Both
1.	Stage Director			
2.	Park Recreation Leader			
3.	Chemist			
4.	Electronic Technician			
5.	IBM Equipment Operator			
6.	Sales Manager			
7.	Social Director			
8.	Chairperson			
9.	President			
10.	Orchestra Conductor			
11.	Counselor			
12.	Airplane Technician			
13.	Tax Consultant			
14.	Travel Consultant			
15.	Editor			
16.	Probation Officer			
17.	Archaeologist			
18.	Photographer			
19.	Motion Picture Executive			
20.	Novelist			
21.	Marine Scientist			
22.	Astronaut			
23.	Composer			
24.	Doctor			
25.	Professor			
26.	Engineer			
27.	Economic Advisor			
28.	Artist			
29.	Humanitarians			
30.	Race Driver			
31.	Business Leader			
32.	Government Leader			
33.	Stage Director			
34.	Psychiatric Case Worker			
35.	Science Researcher			
36.	Forest Ranger			
37.	Computer Operator			
38.	Advertising Agent			

APPENDIX E

REVISED VIP INTEREST INVENTORY

VOCATIONAL INTEREST INVENTORY

1. The adjective which best describes me is:

   A. Creative
   B. Interested in people
   C. Intellectual
   D. Practical
   E. Good at following directions
   F. Outgoing personality

2. The occupation which appeals to me most is:

   A. Journalist
   B. Park recreation leader
   C. Researcher
   D. Hair dresser
   E. Certified public accountant
   F. Buyer

3. When I have a problem, I usually:

   A. Take a look at how I really feel
   B. Rap with a friend
   C. Think through all the possibilities
   D. Take the most practical solution

4. I think that other people consider me to be:

   A. Original in thinking
   B. Idealistic
   C. Scholarly
   D. Matter-of-fact
   E. Hard working
   F. Popular

5. I am happiest when:

   A. I do creative work
   B. I work on a project with other people
   C. I work on a biology project
   D. I refinish furniture
   E. I do assigned work well
   F. I present a new idea to someone

6. The one word that describes me best is:

   A. Artistic
   B. Understanding
   C. Logical
   D. Useful
   E. Dependable
   F. Sociable

7. In my spare time, I would most like to:

A. Take photographs
B. Join a club
C. Study the effects of air pollution
D. Construct a picture frame
E. Be an official time keeper at sports events
F. Read business magazines and newspapers

8. I like most to:

A. Work alone on a project
B. Work with a group of people on a project
C. Solve puzzles that require a lot of concentration
D. Wash and polish a car
E. Give a party for a lot of people
F. Sell things door to door

9. I feel most uncomfortable:

A. Participating in sports
B. Doing a job with little recognition
C. Leading others
D. Teaching others
E. Picking my own topic for a report
F. Keeping careful records

10. If I had the afternoon free and I could only do one of these things, I would:

A. Paint a picture
B. Be with a group of friends
C. Research a topic in the library
D. Train animals
E. Make consumer price checks in the retail stores
F. Sell tickets for the school carnival

11. If I were offered six kinds of jobs, I would prefer to:

A. Write/produce a TV program
B. Counsel victims of a disaster
C. Investigate the causes of heart desease
D. Paint houses - inside and out
E. Supervise collection of information about the causes of cancer
F. Help auction off used furniture

12. I would most like to be:

A. Member of a musical organization
B. A counselor for drug abuse
C. A lab assistant in the botany department
D. A member of the tennis team
E. The treasurer of an organization
F. A student council officer

13. If I could have any position I want in a club, I'd prefer to:

A. Do the graph work for the advertising
B. Be the social director
C. Plan new projects for the club
D. Work on stage props
E. Be chairperson
F. Be in charge of public relations

14. If I could be anything I'd like to be, I would choose:

A. A movie star
B. Counselor
C. Speech therapist
D. A trail guide at a national park
E. Data processor
F. Real estate broker

15. I'd like someone to offer me a job as:

A. Photo editor of a magazine
B. Legal adviser for the poor
C. Archaeologist exploring ruins
D. Head chef in an exclusive hotel
E. Reservations agent
F. Motion picture executive

16. If I were on a committee to plan the float for a parade, I would like to be:

A. The one who designs the float
B. The one who works out any problems
C. The one who plans the activities
D. The one who actually builds the float
E. The one who keeps track of the receipts and bills
F. The one who gets everybody working and involved

17. If I were to work at the United Nations building in New York I'd prefer to work on:

A. Programs for Radio Free Europe
B. Emergency relief committee
C. Committee for pollution control
D. Committee for technical assistance to underdeveloped countries
E. Committee for international financial stability
F. U.S. representative to the United Nations

18. If I were going to select a film from those listed, I'd choose one about:

A. A novelist overcoming discouragement
B. A former delinquent who helps runaways
C. The effects of radioactivity at Three Mile Island
D. How to upholster and repair furniture
E. The IRS' detection of tax fraud
F. A clever person's rise to riches

19. If I could only achieve one of the following, it would be most important:

A. To create something of great beauty
B. To improve the living conditions in a community
C. Study alternative energy resources
D. To win an architectural drafting award
E. To see that plans are organized and running
F. To be a persuadive group leader

20. If only one of the following people could be given an award, I would choose the:

A. World renowned composer
B. A doctor working in a ghetto
C. A historian from the Smithsonian
D. Dental technican who invented a new dental pick
E. Economic advisor to the world bank
F. Public relations expert for general foods.

21. The professional group I most admire are:

A. Artists
B. Social workers
C. Psychologists
D. Landscapers
E. Accountants
F. Market analysts

22. I am most proud of:

A. Expressing something in a drawing or song
B. Helping others
C. Thinking up ideas
D. Things I make with my hands
E. My reputation for getting a job well done
F. Winning a contest or competition

23. From my first impressions of the following jobs, I would choose:

A. Designer
B. Case worker
C. Research worker
D. Mail carrier
E. Computer operator
F. Advertising agent

24. If the school adopts a rule which I dislike, I would:

A. Disregard the rule and do what I feel is right
B. Organize a group protest
C. Go along with the rule